

Abstract**5 Microfluidic device wherein the interface between a liquid and a fluid non-miscible with one another is stabilized.**

The microfluidic device (1) comprises at least one microchannel bounded by a bottom wall (2), side walls (4) and a top wall (5) and which is designed to contain at least one liquid (6) and at least one fluid (7) non-miscible with the liquid (6).

10 The microfluidic device comprises means for stabilizing the interface between the liquid and the fluid. The means for stabilizing comprise at least one electrode (9) arranged on at least one part of a first wall of the microchannel, over the entire length thereof, and at least one counter-electrode (10) arranged over the entire length of the microchannel, on at least one part of a second wall, arranged 15 facing the electrode. The electrode (9) and counter-electrode (10) are preferably respectively arranged on the bottom wall (2) and the top wall (5) of the microchannel.

20 (Figure 1)

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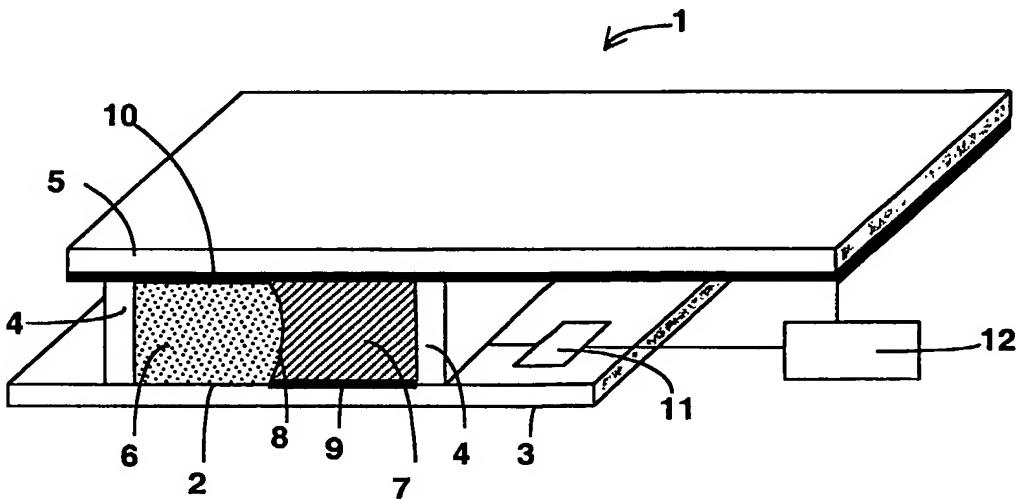
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(54) Title: MICROFLUIDIC DEVICE WHEREIN THE LIQUID/FLUID INTERFACE IS STABILIZED

(54) Titre : DISPOSITIF MICROFLUIDIQUE DANS LEQUEL L'INTERFACE LIQUIDE/FLUIDE EST STABILISEE



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(57) **Abstract:** The invention concerns a microfluidic device (1) comprising at least one micro-channel delimited by lower (2), lateral (4) and upper (5) walls and designed to contain at least one liquid (6) and at least one fluid (7) non-miscible with the liquid (6). The microfluidic device comprises means for stabilizing the interface between the liquid and the fluid. The stabilizing means include at least one electrode (9) arranged on at least one part of a first wall of the micro-channel, over the entire length thereof and at least one counter-electrode (10) arranged over the entire length of the micro-channel, on at least one part of a second wall, arranged opposite the electrode. The electrode (9) and the counter-electrode (10) are preferably respectively arranged on the micro-channel lower (2) and upper (5) walls.

(57) **Abrégé :** Le dispositif microfluidique (1) comporte au moins un micro-canal délimité par des parois inférieure (2), latérales (4) et supérieure (5) et qui est destiné à contenir au moins un liquide (6) et au moins un fluide (7) non miscible avec le liquide (6). Le dispositif

[Suite sur la page suivante]